

# Updating a Tradition



## The New Yellow Shuttle Bus

The U.S. Department of Energy's Idaho National Laboratory, in conjunction with automotive industry leaders, the Department of Energy, Federal Transit Authority, the National Park Service, and private industry, has developed a low-floor, 18 to 32 passenger vehicles that uses alternative fuel and complies with the Americans with Disabilities Act (ADA).

A "low-floor" bus has the passenger area built low to the ground so that no steps are required for entry; it also has a ramp that can be extended to accommodate passengers in wheelchairs. This is a critical and much anticipated improvement over the current

generation of wheelchair-accessible shuttles.

Equally important were the team's efforts which resulted in a medium-duty community/transit shuttle with higher fuel efficiency and lower emissions. This new bus costs 45% less than current low-floor buses.

In the first phase of the project, completed in 2003, program partners developed and ADA-compliant, low-floor shuttle bus prototype. The development of the prototype followed identification of a need by the Nation Park Service for a year-round transit vehicle that could be used for park operations. In addition, amenities were incorporated to support tourism in the

national parks. The second phase, completed in 2004, included unique body styling and increased amenities to enhance the visitor experience. This vehicle provides the benefits of greater fuel economy and range, lower emissions, and reduced noise vibration. Early market analysis indicated that the vehicle could have broad applications in municipal transit and private sector transportation.

The next version of the bus is being developed to incorporate both liquid natural gas (LNG) and compressed natural gas (CNG), as well as a mechanical hybrid system which captures energy dur-

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ing braking, and utilizes that energy during acceleration. In addition, a state of the art intelligent transportation system is being integrated to support transit applications.

The rights for this technology were acquired by International Bus in September 2004. This vehicle became a commercially available product for International Bus with its startup in June 2005.

Partners in this project with the INL include Ruby Mountain, Greater Yellowstone/Teton Clean Cities Coalition,

ARBOC, the National Park Service, and ASG Renaissance.

Other facts about the new yellow bus:

- The vehicle has rear wheel drive and uses air suspension and kneeling suspension.
- In the winter the bus tires are removed and replaced with snow tracks which allow the bus to go almost anywhere.
- The floor is flat with theater/stadium seating which slopes 1.8 degrees to the front.
- Presently the chassis is being designed to carry the equivalent of 40 gasoline gallons of compressed natural gas, 119 gallons of liquid natural gas, and the mechanical hybrid system, all between the rails.
- The vehicle platform is flexible enough to support several body designs and interior configurations. The vehicle can be manufactured with several drivetrains, including, but not limited to: compressed natural gas, liquid natural gas, propane, and biodiesel.

### For more information

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INL is a U.S. Department of Energy national laboratory operated by Battelle Energy Alliance



## Treading Lightly

